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Two systematic reviews of literature have been conducted. One focused on the efficacy, identifying health technology agencies reports, meta-analysis, systematic reviews, and randomized controlled trials (RCTs). The safety systematic review included the previous designs plus observational studies. In the latter review, studies in subsequent lines of treatment were considered. Searches were done in MEDLINE, EMBASE, CRD, and the Cochrane Library until the 8th of June. The quality assessment of the studies was done with the SIGN and CASPe tools. Two authors independently selected the studies, assessed the quality, and performed the data extraction, with disagreements resolved by a third reviewer until consensus was obtained. **RESULTS:** In the efficacy systematic review, three RCTs were included. The chemotherapy in one of these trials was FOLFIRI, in another trial FOLFOX-4, and in the other one was oxaliplatin and fluoropyrimidine chemotherapy. In the safety systematic review, five RCTs (3 studies in first-line, one study in second-line and another with cetuximab in monotherapy in subsequent lines), and an observational study were considered. Cetuximab in combination with FOLFIRI improved overall survival (OS), resection rate, progression free survival (PFS) and overall tumour response rate (RR). Whereas, an increase in terms of OS was not observed with cetuximab in combination with oxaliplatin based regimen, and different results were obtained in PFS. The only benefit observed with the later regimen was in the RR. In terms of safety, cetuximab increased grade 3 or 4 skin toxicity. **CONCLUSIONS:** The benefit of the addition of cetuximab to standard therapy for previously untreated mCRC, KRAS wild-type patients differs depending on the chemotherapy associated, with an improvement in all the outcomes when FOLFIRI is used.

PCN4

EFFECT OF ANTIEMETIC PROPHYLAXIS AGAINST CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING WITH 5-HT3 RECEPTOR ANTAGONISTS IN PATIENTS WITH LYMPHOMA

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OBJECTIVES: 5-hydroxytryptamine3 receptor antagonists (5-HT3 RAs) are used for prophylaxis of chemotherapy-induced nausea and vomiting (CINV). This study compared the risk of severe CINV associated with hospitalization or emergency room admission among patients with lymphoma initiated and maintained on palonosetron versus the other 5-HT3 RAs (granisetron, ondansetron, and dolasetron). **METHODS:** Adult patients diagnosed with lymphoma and treated with cyclophosphamide were selected from PharMetrics claims data (2005-2009). Other inclusion criteria were continuous patient enrollment for at least ≥6 months before the initial diagnosis and receipt of 5-HT3 RA for CINV prevention on the day of cyclophosphamide treatment (index date). CINV was identified by ICD-9-CM claims for nausea, vomiting, and/or dehydration. Risk of CINV during the follow-up period of 6 months from index date was assessed using multiple regression models, controlling for age, gender, Charlson Comorbidity Index (CCI), and total dose of cyclophosphamide. **RESULTS:** A total of 2609 patients were studied. Palonosetron patients (n=979; 37.5%) were older than the other 5-HT3 RAs (62.1 ± 13.6 vs. 59.0 ± 14.1 years, p<0.0001), with similar CCI and gender. During follow-up, palonosetron patients received more cyclophosphamide dose in significantly fewer CT days (+586 mg; p=0.0005 and -0.73 days, both p<0.0001), and had fewer patients experiencing unadjusted severe CINV (7.3% vs. 10.4%, p=0.007) as compared to the other 5-HT3 RA patients. Multiple regressions found that palonosetron group (versus the other 5-HT3 RA group) experienced fewer CINV claims (0.47 less; p=0.0253), fewer CINV days (48% less; p=0.0006), and a 34% lower severe CINV risk (Odds Ratio=0.66; p=0.006). **CONCLUSIONS:** Patients in palonosetron group received higher CT dose within fewer CT days and experienced significantly lower risk for potentially costly CINV events than patients on other 5-HT3-RA-based antiemetic prophylaxis. Further studies on the clinical and economic impact of the choice of 5-HT3-RA for CINV prophylaxis in patients with lymphoma are needed.

PCN5

REDUCED RISK OF CHEMOTHERAPY-INDUCED NAUSEA AND VOMITING IN PATIENTS WITH CANCER TREATED WITH HIGHLY EMETOGENIC CHEMOTHERAPY AND ANTIEMETIC PROPHYLAXIS WITH PALONOSETRON

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OBJECTIVES: Palonosetron, dolasetron, granisetron, and ondansetron [5-HT3 receptor antagonists (5-HT3-RAs)] are indicated to prevent chemotherapy-induced nausea and vomiting (CINV). This study assessed the risk of uncontrolled CINV following antiemetic prophylaxis with palonosetron + dexamethasone (group 1) versus any of the other 5-HT3-RAs + dexamethasone (group 2) among single-day HEC cycles in cancer diagnosed patients. **METHODS:** Single-day HEC cycles (a gap of at least 5 days between 2 administrations) among patients with a cancer diagnosis and initiating antiemetic prophylaxis with group 1 versus group 2 between June 1, 2006 to June 30, 2010 were identified from the IMS LifeLink claims database. Uncontrolled CINV events were defined as nausea, vomiting, or dehydration ICD-9-CM codes, hydration CPT codes, rescue medications, and/or use of antiemetic therapy from days 2-5 post-HEC administration. Risk for an uncontrolled CINV event was analyzed at cycle level using a logistic multivariate regression model controlling for key variables. **RESULTS:** A total of 67,873 group 1 and 26,540 group 2 cycles (17,272 and 7,365 patients, respectively) were analyzed. Groups 1 and 2 were similar in age [mean (sd): 55.0 (12.3) vs. 55.3 (12.6) years; p=0.1502], Charlson comorbidity score [6.2 (3.2) vs. 6.2 (3.2); p=0.7949], and female distribution (74.7% vs. 73.7%; p=0.0893). Versus group 2, group 1 patients had a higher percent of breast cancer (45.0% vs. 42.2%; p<0.0001) and a lower percent of lymph/hematologic malignancies (11.6% vs. 13.4%; p=0.0002). Group 1 cycles had a significantly lower unadjusted risk of an uncontrolled CINV event (14.1% vs. 15.4%; p<0.0001), while the regression analysis predicted a 10% lower risk for group 1 cycles [Odds Ratio: 0.90 (95% CI: 0.86 – 0.93); p<0.0001]. **CONCLUSIONS:** In this retrospective claims data analysis, patients with cancer receiving single-day HEC cycles and group 1 prophylaxis for CINV had a lower risk for an uncontrolled CINV event versus group 2 prophylaxis.

PCN6

IMPACT OF 5-HT3 RECEPTOR ANTAGONIST SELECTION WITHIN TRIPLE ANTIEMETIC REGIMENS ON THE RISK OF UNCONTROLLED CHEMOTHERAPY-INDUCED NAUSEA IN PATIENTS WITH CANCER TREATED WITH HIGHLY EMETOGENIC CHEMOTHERAPY

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OBJECTIVES: Palonosetron, dolasetron, granisetron, and ondansetron [5-HT3 receptor antagonists (5-HT3-RAs)] are indicated to prevent chemotherapy-induced nausea and vomiting (CINV). This study assessed the risk of uncontrolled CINV following antiemetic prophylaxis with palonosetron + dexamethasone (group 1) versus any of the other 5-HT3-RAs + dexamethasone (group 2) among single-day HEC cycles in cancer diagnosed patients. **METHODS:** Single-day HEC cycles (a gap of at least 5 days between 2 administrations) among patients with a cancer diagnosis and initiating antiemetic prophylaxis with group 1 versus group 2 between June 1, 2006 to June 30, 2010 were identified from the IMS LifeLink claims database. Uncontrolled CINV events were defined as nausea, vomiting, or dehydration ICD-9-CM codes, hydration CPT codes, rescue medications, and/or use of antiemetic therapy from days 2-5 post-HEC administration. Risk for an uncontrolled CINV event was analyzed at cycle level using a logistic multivariate regression model controlling for key variables. **RESULTS:** A total of 67,873 group 1 and 26,540 group 2 cycles (17,272 and 7,365 patients, respectively) were analyzed. Groups 1 and 2 were similar in age [mean (sd): 55.0 (12.3) vs. 55.3 (12.6) years; p=0.1502], Charlson comorbidity score [6.2 (3.2) vs. 6.2 (3.2); p=0.7949], and female distribution (74.7% vs. 73.7%; p=0.0893). Versus group 2, group 1 patients had a higher percent of breast cancer (45.0% vs. 42.2%; p<0.0001) and a lower percent of lymph/hematologic malignancies (11.6% vs. 13.4%; p=0.0002). Group 1 cycles had a significantly lower unadjusted risk of an uncontrolled CINV event (14.1% vs. 15.4%; p<0.0001), while the regression analysis predicted a 10% lower risk for group 1 cycles [Odds Ratio: 0.90 (95% CI: 0.86 – 0.93); p<0.0001]. **CONCLUSIONS:** In this retrospective claims data analysis, patients with cancer receiving single-day HEC cycles and group 1 prophylaxis for CINV had a lower risk for an uncontrolled CINV event versus group 2 prophylaxis.

PCN7

THE INCIDENCE AND OUTCOME OF FEBRILE NEUTROPENIA IN DIFFERENT CHEMOTHERAPY REGIMENS FOR CANCER PATIENTS IN BELGIUM

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OBJECTIVES: The incidence of febrile neutropenia (FN) depends on the cancer type and the chemotherapy regimen used. In Belgium, reimbursement of granulocyte-colony stimulating factors (G-CSF) in primary prophylaxis against FN is limited to 4 indications. This study aimed to provide real-life information on the incidence and impact of FN in chemotherapy-cancer combinations excluded from G-CSF primary prophylaxis reimbursement. **METHODS:** Based on ICD-9 code and drug name all chemotherapy-cancer combinations with at least one patient having an ICD-9 code corresponding to neutropenia (288.0) and/or fever (780.6) and where G-CSF primary prophylaxis was not reimbursed, were retrieved from the IMS Hospital Disease database for the period 2005-2008. This database includes longitudinal (per calendar year) information on diagnoses and drugs prescribed in about 34% of all Belgian hospital beds. Incidence of FN (cases of FN with chemo-cancer combination divided by total number of patients with this chemo-cancer combination), mortality in patients with and without FN and impact of FN on subsequent chemotherapy treatment decisions were assessed. **RESULTS:** Among the 25,544 patients at risk, 3,191 (13%) had at least one FN episode. Highest incidence rates were found in combinations of cisplatin-containing regimens with head and neck (71/287, 25%), stomach (24/110, 22%) and esophagus (36/202, 18%) cancers, lung cancers treated with cisplatin-etoposide (52/292, 18%) or carboplatin-etoposide (102/659, 16%) regimen and multiple myeloma treated with doxorubicin-vincristine regimen (26/152, 17%). Overall, 50% of first FN episodes occurred during cycle 1. Of the 3191 FN patients 11% died, 24% switched chemotherapy regimen and 22% stopped treatment during the cycle with FN. FN occurred subsequently in 27% of 1367 patients continuing the same regimen. **CONCLUSIONS:** This study suggests clinically significant FN-incidence is associated with chemotherapy regimens where G-CSF primary prophylaxis is not reimbursed in Belgium, which may lead to negative outcomes in terms of mortality and treatment disruption.

PCN8

INCIDENCE, PREDICTIVE FACTORS, AND INFECTION COMPLICATIONS OF PROLONGED NEUTROPENIA IN R-CHOP/CHOP TREATED DIFFUSE LARGE B-CELL LYMPHOMA PATIENTS

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